

**INCREASED USER CAPACITY
ULTRA WIDEBAND (UWB) SIGNAL FORMATTING SCHEME**

ABSTRACT OF THE DISCLOSURE

A method for ultra wideband (UWB) communication in which UWB pulses are transmitted to multiple users during a single time interval used in a time division multiple access (TDMA) system. In one disclosed form of the invention, multiple subintervals or sub-divisions of each TDMA time interval are allocated to the transmission of multiple UWB pulses representing multiple data bits to be transmitted to the same user. Multiple subintervals of the same TDMA time interval are allocated to the reception of multiple return UWB pulses from the same user. In another disclosed form of the invention, multiple subintervals of each TDMA time interval are allocated to the transmission of multiple UWB pulses representing data bits to be transmitted to multiple respective users. Multiple subdivisions in the same TDMA time interval are allocated to the reception of return UWB pulses from the respective multiple users.